



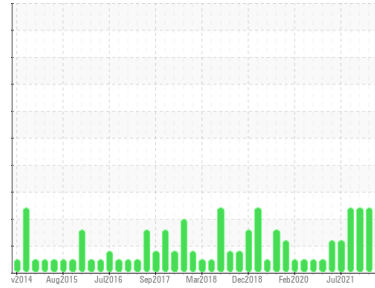
OIL ANALYSIS REPORT

Sample Rating Trend

FUEL



Area
GFL216
Machine Id
4475
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (30 LTR)



DIAGNOSIS

Recommendation

We advise that you check the fuel injection system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Fluid Condition

Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0099687	GFL0089250	GFL0042401
Sample Date	Client Info		16 Dec 2023	31 Jul 2023	09 Mar 2022
Machine Age	hrs	Client Info	39917	489269	470693
Oil Age	hrs	Client Info	0	0	0
Oil Changed	Client Info		Changed	Changed	N/A
Sample Status			SEVERE	SEVERE	SEVERE

CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.2	NEG	NEG	NEG
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>120	19	71	22
Chromium	ppm	ASTM D5185(m)	>20	<1	2	<1
Nickel	ppm	ASTM D5185(m)	>5	0	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	0	0	0
Silver	ppm	ASTM D5185(m)	>2	0	0	<1
Aluminum	ppm	ASTM D5185(m)	>20	2	2	1
Lead	ppm	ASTM D5185(m)	>40	2	7	2
Copper	ppm	ASTM D5185(m)	>330	<1	5	1
Tin	ppm	ASTM D5185(m)	>15	<1	2	<1
Antimony	ppm	ASTM D5185(m)		0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
Beryllium	ppm	ASTM D5185(m)		0	0	0
Cadmium	ppm	ASTM D5185(m)		0	0	0

ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m)	0	2	5	2
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	60	55	56	53
Manganese	ppm	ASTM D5185(m)	0	0	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	908	896	903
Calcium	ppm	ASTM D5185(m)	1070	991	982	900
Phosphorus	ppm	ASTM D5185(m)	1150	949	986	965
Zinc	ppm	ASTM D5185(m)	1270	1097	1121	1071
Sulfur	ppm	ASTM D5185(m)	2060	2545	2301	2326
Lithium	ppm	ASTM D5185(m)		<1	<1	0

CONTAMINANTS

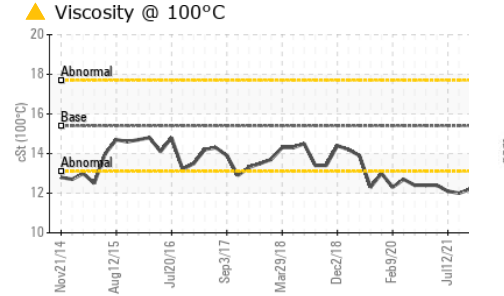
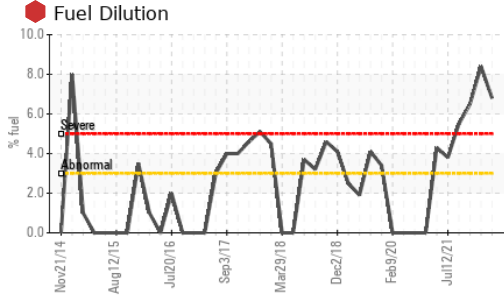
	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>25	2	4	2
Sodium	ppm	ASTM D5185(m)		6	3	3
Potassium	ppm	ASTM D5185(m)	>20	0	<1	<1
Fuel	%	ASTM D7593*	>3.0	6.8	8.4	6.5

INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>4	0.4	1.6	0.3
Nitration	Abs/cm	ASTM D7624*	>20	6.4	9.6	6.9
Sulfation	Abs./1mm	ASTM D7415*	>30	18.3	22.4	19.6



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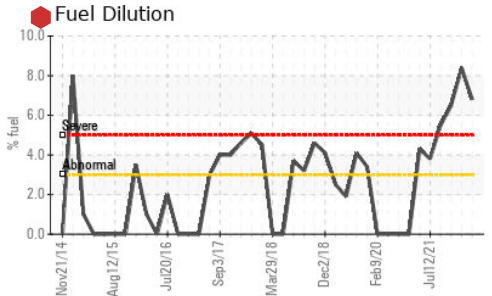
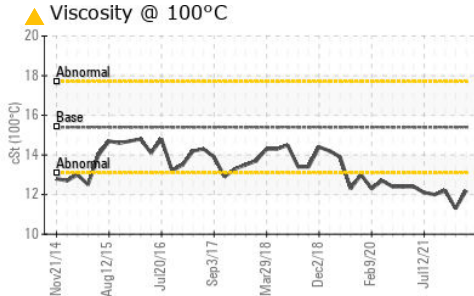
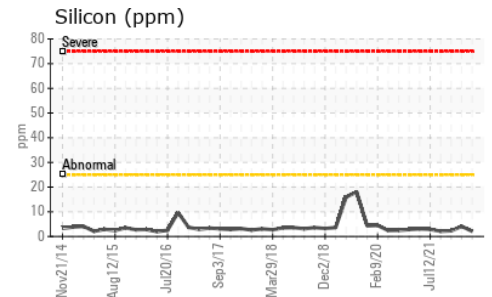
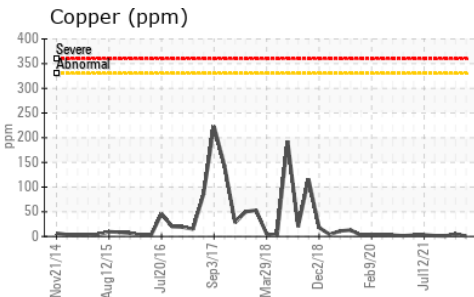
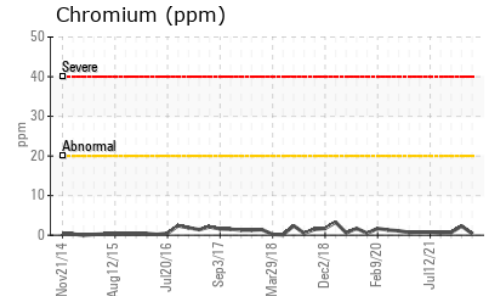
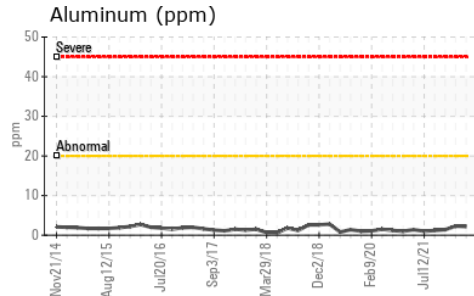
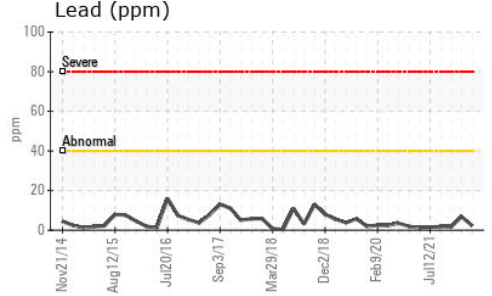
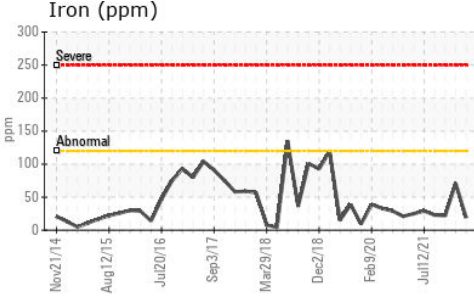


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	13.2	15.8	13.9

VISUAL		method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	▲ 12.2	▲ 11.3	▲ 12.2

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 252 - GTA Hauling
Sample No. : GFL0099687 **Received** : 21 Dec 2023
Lab Number : 02604567 **Diagnosed** : 22 Dec 2023
Unique Number : 5697652 **Diagnostician** : Wes Davis
Test Package : MOB 1 (Additional Tests: PercentFuel)

To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.

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